In the Claims

The following presentation of Claims replaces all previous versions.

We claim:

1. (currently amended) A method of assessing the infectivity status of a host infected with HIV, from a sample taken from the host, comprising:

a. measuring independently of each other the number of cells in the sample which are expressing cell-surface gp120 and the number of lymphocytes in said sample which are CD4 positive;

b. combining the result of the measurement of the number of cells expressing cell-surface gp120 and the result of the measurement of the number of lymphocytes which are CD4 positive;

wherein the infectivity status of the host is assessed from the combination of the result of the measurement of the number of cells expressing cell-surface gp120 and the result of the measurement of the number of lymphocytes which are CD4 positive.

2. (original) A method of claim 1, wherein the infectivity status is represented by the number of cells expressing cell-surface gp120 per unit volume divided by the number of cells which are CD4 positive per unit volume.

3. (original) A method of claim 1, wherein the measuring is accomplished by flow cytometry.

4. (previously presented) A method of wherein the measuring is accomplished by a fluorescence resonance energy transfer assay.

5. (original) A method of claim 1, wherein the cells are peripheral blood mononuclear cells.

6. (original) A method of claim 1, further comprising: combining an effective amount of an anti-gp120 antibody attached to a first detectable label and an effective amount of an anti-CD4 antibody attached to a second detectable label under conditions effective for said antibodies to bind gp120 and CD4 respectively.

7. (original) A method of claim 6, wherein said measuring is accomplished by flow cytometry.

8. (currently amended) A method of detecting lymphocytes expressing cell-surface gp120 in an aqueous sample containing viral infected cells displaying gp120, comprising:

a. combining to form a mixture:

i. an effective amount of a first antibody, comprising an anti-gp120 antibody, wherein the first antibody is attached to a detectable label,

ii. an effective amount of a second antibody, comprising an ~~label~~ antibody specific for said detectable label, wherein said ~~label~~ second antibody is attached to a magnetic particle, and

iii. the sample;

b. incubating said mixture under conditions effective for (i) binding of said ~~anti-gp120~~first antibody to gp120 on said cells, and (ii) for binding of said second antibody ~~specific for said detectable label~~ to said detectable label attached to said anti-gp120 antibody, to form a complex, wherein said ~~anti-gp120~~first antibody is bound to said gp120 displayed on a viral infected cell;

c. separating said complex by applying a magnetic field to said mixture, whereby said complex is retained by said magnetic field, and

d. determining the presence of magnetically separated lymphocytes expressing cell-surface gp120.

9. (original) A method of claim 1, wherein the CD4 count of said host is less than 200/mm.sup.3 of whole blood.

10. (original) A method of claim 1, wherein the host has been treated with HAART.

11. (currently amended) A method of determining the infectivity status of a host infected with HIV virus who has tested negative in a virus co-culture assay, comprising: measuring the fraction of lymphocytes expressing cell-surface gp120 and the fraction of lymphocytes which are CD4 positive, and assessing the infectivity status of the host from a combination of the measurements of the two fractions.

12. (original) A method of claim 11, wherein the measuring is accomplished by flow cytometry.

13. (original) A method of claim 11, wherein the measuring is accomplished by a fluorescence resonance energy transfer assay.

14. (original) A method of claim 11, wherein the cells are peripheral blood mononuclear cells.

15. (original) A method of claim 11, further comprising: combining an effective amount of an anti-gp120 antibody attached to a first detectable label and an effective amount of an anti-CD4 antibody attached to a second detectable label under conditions effective for said antibodies to bind gp120 and CD4 respectively.

16. (original) A method of claim 15, wherein said measuring is accomplished by flow cytometry.

17. (canceled)